

Danial Mariam RUSH 10687914

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Set	Items	Description
S1	102274	(IMAGE?? OR PHOTOGRAPH?? OR PHOTO??)(3N)(VIDEO OR CAMERA)
S2	2058	OPTICAL(3N)PRECISION(3N)(MEASUR? OR EVALUAT? OR CALCULAT? - OR DETERMIN?)
S3	232	ANCILLARY(3N)(PARAMETER? OR VALUES)
S4	2298218	CONTRAST OR HOMOGENEITY OR MEAN()BRIGHTNESS OR BRIGHTNESS - OR GRADIENT?
S5	170	INFLUENCE()QUANTITIES
S6	2401543	WEIGHT? OR WEIGH? OR RANK?
S7	32418	S6(3N)(SUMM OR SUMMATION OR TOTAL)

S8 15859 TARGET(3N)FUNCTION??  
 S9 1 S3(3N)(ALL OR TOTAL)  
 S10 3 (EXTREMUM OR MAXIMUM)(3N)FUNCTIONAL()DEPENDENCY  
 S11 640 AU=(NEHSE, U? OR LINSS, G? OR KUHN, O? OR NEHSE U? OR LINSS  
 G? OR KUHN O?)  
 S12 832712 WAVELENGTH?? OR WAVE()LENGTH??  
 S13 1769918 2D OR (2 OR TWO)(3N)(STRUCTURE? OR DIMENSION?)  
 S14 58477 WORKPIECE??  
 S15 1245647 SCANNED OR SCANS OR SCANNING  
 S16 319 TARGET(3N)QUANTITIES  
 S17 1 (S3 OR S4) AND S5  
 S18 0 S9 NOT MERCURY  
 S19 1 RD S10 (unique items)  
 S20 0 S19 NOT (ENVIRONMENT OR VEIBULL)  
 S21 22 S11 AND S4  
 S22 0 S21 AND (S3 OR S5 OR S8)  
 S23 0 S21 AND S2  
 S24 15 S21 NOT PY=>2002  
 S25 10 RD S24 (unique items)  
 S26 3 S25 NOT (OLGA OR QUASAR?? OR ENVIRONMENT? OR INFECTION OR -  
 EQUATORIAL OR SUPERNOVA)  
 S27 100 S11 AND OPTICAL?  
 S28 8 S27 AND (S14 OR S15 OR S16)  
 S29 7 RD S28 (unique items)  
 S30 51 S2 AND (S3 OR S4)  
 S31 0 S30 AND S8  
 S32 7 S30 AND S12  
 S33 7 S32 NOT (S29 OR S26)  
 S34 4 S33 NOT PY=>2002  
 S35 0 S30 AND S7  
 S36 9 S30 AND (S14 OR S15)  
 S37 6 S36 NOT (S32 OR S29 OR S26)  
 S38 5 RD S37 (unique items)  
 S39 136 S1 AND S15 AND FOCUS  
 S40 19 S39 AND (S3 OR S4)  
 S41 19 S40 NOT (S36 OR S32 OR S29 OR S26)  
 S42 7 S41 NOT PY=>2002  
 S43 7 RD S42 (unique items)  
 S44 2080 OPTICAL(3N)(PRECISION OR PRECISENESS)(3N)(MEASUR? OR EVALU-  
 AT? OR CALCULAT? OR DETERMIN? OR INSPECT????)  
 S45 56036 S6(3N)(SUMM OR SUMMATION OR TOTAL OR SUM OR ACCUMULAT?)  
 S46 1 S44 AND S45  
 S47 1 S46 NOT (S40 OR S36 OR S32 OR S29 OR S26)  
 S48 0 S47 NOT COTTON  
 S49 57 S44 AND (EXTREMUM OR MAXIMUM)  
 S50 0 S49 AND S16  
 S51 0 S49 AND S5  
 S52 2 S49 AND S4  
 S53 2 RD S52 (unique items)  
 S54 1 S53 NOT (S46 OR S40 OR S36 OR S32 OR S29 OR S26)

14874793 PASCAL No.: 01-0021990

**EBSIM: A simulation tool for electron beam welding**

**Ninth international conference on computer technology in welding :**

**detroit MI, 28-30 September 1999**

DILTHEY U; BRANDENBURG A; BOEHM S; WELTERS T; ILJIN S; TURICHIN G

ISF-Welding Institute, Aachen University, Germany; State Technical

University, St. Petersburg, Russia

National Institute of Standards and Technology, United States

International conference on computer technology in welding, 9 (Detroit  
Mi USA) 1999-09-28

Journal: NIST special publication, 2000, 949 213-225

Language: English

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...introduction into some physical aspects of the model is also given. It  
is shown which **influence quantities** are not neglected in **contrast** to  
some other already existing models. In order to evaluate the performance of  
the simulation...

?

**26/3,K/1 (Item 1 from file: 95)**

DIALOG(R)File 95:TEME-Technology & Management

(c) 2007 FIZ TECHNIK. All rts. reserv.

01666389 20020705945

**Beleuchtungs- und Fokusregelungen fuer die objektivierte optische**

**Praezisionsantastung in der Koordinatenmesstechnik**

**Nehse, U**

TU Ilmenau, D

2001

Document type: Dissertation Language: German

Record type: Abstract

**Nehse, U**

DESCRIPTORS: PRECISION MEASUREMENT; COORDINATE MEASURING INSTRUMENTS;

ILLUMINATION; BEAM FOCUSING; MEASUREMENT ERRORS; AUTOMATIC CONTROL

SYSTEMS;

CORECTION VARIABLE; **BRIGHTNESS CONTRAST**; **BRIGHTNESS**; IMAGE EVALUATION

; EQUATIONS...

**26/3,K/2 (Item 1 from file: 239)**

DIALOG(R)File 239:Mathsci

(c) 2007 American Mathematical Society. All rts. reserv.

01469947. MR 57##9775

**Construction of Jordan pairs by the quasi-inverse.**

**Kuhn, Oda**

J. Algebra

1978, 50, no. 2, 265--273.

Language: English

Subfile: MR (Mathematical Reviews) AMS

Abstract Length: LONG (34 lines)

Reviewer: Loos, O. (Vancouver, B.C.)

**Kuhn, Oda**

...transformations, the third is a kind of generalized Hua formula, and the fourth is a **homogeneity** property. Here  $H_{\varepsilon}(x,y)$  is the inverse of the Bergman transformation  $B...$

**26/3,K/3 (Item 2 from file: 239)**

DIALOG(R)File 239:Mathsci

(c) 2007 American Mathematical Society. All rts. reserv.

01412265 MR 54##370

**Differentialgleichungen in Jordantripelsystemen.**

**Kuhn, Oda**

Manuscripta Math.

1975, 17, no. 4, 363--381.

Language: English Summary Language: English

Subfile: MR (Mathematical Reviews) AMS

Abstract Length: LONG (85 lines)

Reviewer: Loos, O.

**Kuhn, Oda**

...from the formula  $x \cdot y = -\text{grad} \log \eta(x,y)$ , the **gradient** being taken with respect to  $\sigma \eta$ .

Let  $\xi = \xi(\text{germ } V)$  be the...

?

**29/3,K/1 (Item 1 from file: 2)**

DIALOG(R)File 2:INSPEC

(c) 2007 Institution of Electrical Engineers. All rts. reserv.

06328520 INSPEC Abstract Number: B9609-0170L-004

**Title: Alternative to the matrix camera. Process integrated quality assurance with the aid of a no-contact 2D precision measuring technique**

Author(s): Bruckner, P.; Linss, G. ; Kuhn, O.

Journal: Qualitaet und Zuverlaessigkeit vol.41, no.4 p.412-16

Publisher: Carl Hanser Verlag,

Publication Date: April 1996 Country of Publication: West Germany

CODEN: QLZVAZ ISSN: 0720-1214

SICI: 0720-1214(199604)41:4L:412:AMCP;1-Y

Material Identity Number: Q013-96004

Language: German

Subfile: B

Copyright 1996, IEE

Author(s): Bruckner, P.; Linss, G. ; Kuhn, O.

...Abstract: sectors. It is based on a combination of high-resolution CCD line cameras and precision **scanning** table. This makes it a low-cost alternative to image processing systems using high resolution...

Descriptors: automatic **optical** inspection...

...Identifiers: precision **scanning** table

**29/3,K/2 (Item 2 from file: 2)**

DIALOG(R)File 2:INSPEC

(c) 2007 Institution of Electrical Engineers. All rts. reserv.

05458505 INSPEC Abstract Number: A9318-4272-002, B9309-8530B-003

**Title: Light sources in photoelectric incremental measuring systems**

Author(s): Durschmid, M.; **Linss, G.**

Journal: F&M Feinwerktechnik Mikrotechnik Messtechnik vol.100, no.11  
p.514-20

Publication Date: Nov. 1992 Country of Publication: West Germany

CODEN: FFMEM ISSN: 0340-1952

Language: German

Subfile: A B

Author(s): Durschmid, M.; **Linss, G.**

...Abstract: not only in manufacturing machines but also in precision measuring devices. In such measuring systems **optical** gratings are used as a scale. This scale is **optically scanned** by means of visible light or infrared radiation. Because the light source takes a leading...

...Identifiers: **optical** gratings

**29/3,K/3 (Item 1 from file: 8)**

DIALOG(R)File 8:Ei Compendex(R)

(c) 2007 Elsevier Eng. Info. Inc. All rts. reserv.

10506681 E.I. No: EIP05299220589

**Title: Model based edge detection in height map images with nanometer resolution**

Author: Topfer, Susanne; **Kuhn, Olaf ; Linss, Gerhard ; Nehse, Uwe**

Corporate Source: Technische Universitt Ilmenau, 98693 Ilmenau, Germany

Conference Title: Photonics North 2004: International Conference on Applications of Photonic Technology, ICAPT

Conference Location: Ottawa, Ont., Canada Conference Date:  
20040926-20040929

E.I. Conference No.: 65149

Source: Proceedings of SPIE - The International Society for Optical Engineering Applications of Photonic Technology 7B: Closing the Gap Between Theory, Dev., and Application - Photonics North 2004, Photonic Appl. in Astronomy, Biomedicine, Imaging, Materials Process., and Educ. v 5578 n PART 2 2004.

Publication Year: 2004

CODEN: PSISDG ISSN: 0277-786X

Language: English

Author: Topfer, Susanne; **Kuhn, Olaf ; Linss, Gerhard ; Nehse, Uwe**

...Abstract: curve is modelled with an appropriate mathematical function. Thus, edge detection algorithms well known from **optical** precision measurements are modified and applied to calculate the location of the edge along the...

Descriptors: \*Edge detection; Image processing; Signal processing; Functions; Microstructure; Data processing; **Scanning** electron microscopy; Atomic force microscopy; Mathematical models

**29/3,K/4 (Item 2 from file: 8)**

DIALOG(R)File 8:Ei Compendex(R)

(c) 2007 Elsevier Eng. Info. Inc. All rts. reserv.

10027977 E.I. No: EIP04388365517

**Title: Detecting of microstructures with adaptive strategies based on**

**image sensors and fiberoptic distance sensor technology**

Author: **Kuhn, O. ; Nehse, U.**

Source: VDI Berichte n 1694 2002. p 183-193

Publication Year: 2002

CODEN: VDIBAP ISSN: 0083-5560

Language: English

Author: **Kuhn, O. ; Nehse, U.**

...Abstract: the field of semiconductor fabrication and the new manufacturing technologies of micro parts and micro-**optical** components. A good metrological performance as well as high dynamics in measurement of dimensions in...

...to millimetres is required. A special arrangement of image sensing based measurement and a fibre-**optical** distance measurement is introduced. The Integration in a coordinate measurement system enables it for detection...

...strategy with involvement of lateral information of structures leads to short measurement times, because the **scanning** process is reduced on the interesting regions of the geometry. 11 Refs.

**29/3,K/5 (Item 1 from file: 34)**

DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

(c) 2007 The Thomson Corp. All rts. reserv.

03822955 Genuine Article#: QJ592 No. References: 44

**Title: DISSIPATIVE VIBRATIONAL DYNAMICS IN A CURVE-CROSSING SYSTEM**

Author(s): **KUHN O ; MAY V; SCHREIBER M**

Corporate Source: HUMBOLDT UNIV BERLIN,MAX PLANCK ARBEITSGRP

HALBLEITERTHEORIE,INST PHYS & WIP,HAUSVOGTEIPL 5-7/D-10117

BERLIN//GERMANY//; TECH UNIV CHEMNITZ ZWICKAU,FACHBEREICH PHYS/D-09126

CHEMNITZ//GERMANY/

Journal: JOURNAL OF CHEMICAL PHYSICS, 1994, V101, N12 (DEC 15), P

10404-10415

ISSN: 0021-9606

Language: ENGLISH Document Type: ARTICLE

Author(s): **KUHN O ; MAY V; SCHREIBER M**

...Research Fronts: DIFFERENTIAL CROSS-SECTIONS; HELIUM-LIKE ATOMIC SYSTEMS; EFFECTIVE COLLISION STRENGTHS FOR TRANSITIONS)

93-0840 001 ( **OPTICAL** INTERCONNECTS; **SCANNING** SOFT-X-RAY MICROSCOPY; ZONE PLATES; AR MATRIX; MOLECULAR-DYNAMICS SIMULATION)

93-5064 001 (AMPLITUDE...

**29/3,K/6 (Item 1 from file: 95)**

DIALOG(R)File 95:TEME-Technology & Management

(c) 2007 FIZ TECHNIK. All rts. reserv.

02060170 20060301898

**Wirtschaftliche Qualitaetspruefung geometrischer Merkmale an rotationssymmetrischen Teilen in der Kaltmassivumformung**

Wendl, F; Scharff, Peter; Beyer, Gross, Klaus Peter; Siwczyk, Siegfried;

Linss, Gerhard

TU Ilmenau, DE

2005

Document type: Report Language: German

Record type: Abstract

Wendl, F; Scharff, Peter; Beyer; Gross, Klaus Peter; Siwczyk, Siegfried;

**Linss, Gerhard**

DESCRIPTORS: COLD MASSIVE FORMING; MEASUREMENT ERRORS; QUALITY INSPECTION;  
MATHEMATICAL STATISTIC; GEOMETRIC DIMENSION; **WORKPIECES GEOMETRY**;  
RIVETS

...

...JOINT; BOLTS; SCREWS; AUTOMATED MEASUREMENT; **OPTICAL MEASUREMENT**;  
PROCESS CAPABILITY

**29/3,K/7 (Item 2 from file: 95)**

DIALOG(R)File 95:TEME-Technology & Management

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01954155 20050406419

**Edge detection at height profiles with nano resolution**

(Auffinden der Ecken von Höhenprofilen im Nanometerbereich)

Toepfer, Susanne; Mastylo, Rostyslav; **Linss, Gerhard** ; Manske, Eberhard;

Kuehn, Olaf; **Nehse, Uwe**

TU Ilmenau, DE

4th IEEE Conf. on Nanotechnology 2004, Muenchen, DE, 16-19 Aug, 20042004

Document type: Conference paper Language: English

Record type: Abstract

Toepfer, Susanne; Mastylo, Rostyslav; **Linss, Gerhard** ; Manske, Eberhard;

Kuehn, Olaf; **Nehse, Uwe**

ABSTRACT:

...than the coherence length of the light source used. Edge detection  
algorithms well known from **optical** precision measurements are used to  
estimate the location of the edge along the scan line...

DESCRIPTORS: NANOMETER; **OPTICAL RESOLVING POWER**; **OPTICAL MICROMETERS**;  
THREE DIMENSIONAL **SCANNING** ; SYSTEM DESCRIPTION

?

**34/3,K/1 (Item 1 from file: 2)**

DIALOG(R)File 2:INSPEC

(c) 2007 Institution of Electrical Engineers. All rts. reserv.

06993519 INSPEC Abstract Number: A9818-9385-086, B9809-7710B-027

**Title: Multifunctional laser system for measuring regular and random  
optical refraction in the atmosphere**

Author(s): Kopytin, Yu.D.; Nosov, V.V.; Nosov, E.V.

Author Affiliation: Inst. of Atmos. Opt., Acad. of Sci., Tomsk, Russia

Journal: Proceedings of the SPIE - The International Society for Optical  
Engineering Conference Title: Proc. SPIE - Int. Soc. Opt. Eng. (USA)

vol.3219 p.20-8

Publisher: SPIE-Int. Soc. Opt. Eng,

Publication Date: 1998 Country of Publication: USA

CODEN: PSISDG ISSN: 0277-786X

SICI: 0277-786X(1998)3219L:20:MLSM;1-V

Material Identity Number: C574-98046  
U.S. Copyright Clearance Center Code: 0277-786X/98/\$10.00  
Conference Title: Optics in Atmospheric Propagation and Adaptive Systems  
II

Conference Sponsor: SPIE; CNR; NASA; EOS; Comm. Eur. Communities  
Conference Date: 23-24 Sept. 1997 Conference Location: London, UK  
Language: English  
Subfile: A B  
Copyright 1998, IEE

...Abstract: applicable under conditions of highly inhomogeneous optical paths in the turbulent atmosphere. The LIRA multifunctional **precision** laser system for **measuring** regular and random **optical** refraction has been developed. In **contrast** with the known multiwave methods for remote refraction measurements, this system harnesses one-wave laser...

...0 sec of arc. Atmospheric path length varies between 0.5 and 30 km. The **wavelength** of the laser source is 0.63  $\mu$  m. Laser sources generating other **wavelengths** can also be used in the system.

34/3,K/2 (Item 2 from file: 2)  
DIALOG(R)File 2:INSPEC  
(c) 2007 Institution of Electrical Engineers. All rts. reserv.

03815832 INSPEC Abstract Number: B87014540

**Title: Modelling optical linewidth measurement techniques in order to improve precision and accuracy**

Author(s): Kirk, C.P.; Gurnell, A.W.

Author Affiliation: Dept. of Electr. & Electron. Eng., Leeds Univ., UK

Journal: Proceedings of the SPIE - The International Society for Optical Engineering vol.565 p.62-70

Publication Date: 1985 Country of Publication: USA

CODEN: PSISDG ISSN: 0277-786X

Conference Title: Micron and Submicron Integrated Circuit Metrology

Conference Sponsor: SPIE

Conference Date: 22-23 Aug. 1985 Conference Location: San Diego, CA, USA

Language: English

Subfile: B

**Title: Modelling optical linewidth measurement techniques in order to improve precision and accuracy**

...Abstract: thin and thick layer measurements to variations in parameters such as thickness, refractive index and **wavelength** is investigated and it is concluded that measurement variations between specimens may be reduced by using a broad band illumination source. A method of reducing the spread of measurements by **contrast** correction is presented. A linewidth measurement technique based on image scanning is discussed and typical...

...Identifiers: **wavelength** ; ...

... **contrast** correction

34/3,K/3 (Item 1 from file: 8)  
DIALOG(R)File 8:Ei Compendex(R)



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05267737 E.I. Monthly No: EIM8708-055113

**Title: MODELLING OPTICAL LINEWIDTH MEASUREMENT TECHNIQUES IN ORDER TO IMPROVE PRECISION AND ACCURACY.**

Author: Kirk, Chris P.; Gurnell, Andrew W.

Corporate Source: Leeds Univ, Leeds, Engl

Conference Title: Micron and Submicron Integrated Circuit Metrology.

Conference Location: San Diego, CA, USA Conference Date: 19850822

E.I. Conference No.: 09768

Source: Proceedings of SPIE - The International Society for Optical Engineering v 565. Publ by SPIE, Bellingham, WA, USA p 62-70

Publication Year: 1985

CODEN: PSISDG ISSN: 0277-786X ISBN: 0-89252-600-9

Language: English

**Title: MODELLING OPTICAL LINEWIDTH MEASUREMENT TECHNIQUES IN ORDER TO IMPROVE PRECISION AND ACCURACY.**

...Abstract: thin and thick layer measurements to variations in parameters such as thickness, refractive index and **wavelength** is investigated and it is concluded that measurement variations between specimens may be reduced by using a broad band illumination source. A method of reducing the spread of measurements by **contrast** correction is presented. A linewidth measurement technique based on image scanning is discussed and typical...

**34/3,K/4 (Item 1 from file: 57)**

DIALOG(R)File 57:Electronics & Communications Abstracts

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0000049609 IP ACCESSION NO: 0809048

**Reproducing a units of energy- brightness spectral density, radiation strength spectral density, and energy intensity spectral density for continuous radiation in the wavelength range 0.22-10.6  $\mu$  m.**

Morozov, N A; Bacherikov, V V; Vlasov, L V; Samoilov, L N; Sapritskii, V I; Stepanov, B M

Address not stated

MEAS. TECH., v 26, n 12, p 982-984, 1984

PUBLICATION DATE: 1984

DOCUMENT TYPE: Journal Article

RECORD TYPE: Abstract

LANGUAGE: English

FILE SEGMENT: Electronics & Communications Abstracts

**Reproducing a units of energy- brightness spectral density, radiation strength spectral density, and energy intensity spectral density for continuous radiation in the wavelength range 0.22-10.6  $\mu$  m.**

ABSTRACT:

Advances in many branches of science and technology require **precision measurements** of spectral characteristics on **optical** radiation over a wide **wavelength** range and in energy units. A very important task in such

measurements is to improve...

?

**38/3,K/1 (Item 1 from file: 2)**

DIALOG(R)File 2:INSPEC

(c) 2007 Institution of Electrical Engineers. All rts. reserv.

06298822 INSPEC Abstract Number: A9615-0760H-001

**Title: Precise measurements of refractive index distribution and optical surfaces**

Author(s): Morokuma, T.

Author Affiliation: T. Morokuma Res. Lab., Olympus Opt. Co. Ltd., Tokyo, Japan

Journal: Proceedings of the SPIE - The International Society for Optical Engineering Conference Title: Proc. SPIE - Int. Soc. Opt. Eng. (USA) vol.2576 p.146-54

Publisher: SPIE-Int. Soc. Opt. Eng,

Publication Date: 1995 Country of Publication: USA

CODEN: PSISDG ISSN: 0277-786X

SICI: 0277-786X(1995)2576L:146:PMRI;1-5

Material Identity Number: C574-95207

U.S. Copyright Clearance Center Code: 0 8194 1937 0/95/\$6.00

Conference Title: International Conference on Optical Fabrication and Testing

Conference Sponsor: SPIE

Conference Date: 5-7 June 1995 Conference Location: Tokyo, Japan

Language: English

Subfile: A

Copyright 1996, IEE

...Abstract: the two frontier areas of interest, that is, the measurement of refractive index distribution in **gradient** index glasses and the precise **evaluation** and **measurement** of **optical** surfaces for high **precision** optics. **Scanning** total reflection method and interferometric methods are applied to the refractive index measurement with an...

...Descriptors: **gradient** index optics

...Identifiers: **gradient** index glasses...

... **scanning** total reflection method

**38/3,K/2 (Item 2 from file: 2)**

DIALOG(R)File 2:INSPEC

(c) 2007 Institution of Electrical Engineers. All rts. reserv.

0000526194 INSPEC Abstract Number: 1960A14372

**Title: Space telescopes and components**

Author(s): Spitzer, L.

Journal: Astronomical Journal 65 5 p.242-263

Publication Date: June 1960 Country of Publication: USA

Language: English

Subfile: A

Copyright 2004, IEE

...Abstract: coarse orientation may suffice for initial acquisition, since the angle of the sun from the **optical** axis can easily be **measured** with considerable **precision**. For acquisition, of fainter stars, the

stars themselves must be used for fine orientation, either...

... metals, may be used. An arrangement of concentric tubes promises to yield the necessary thermal **homogeneity** required. Alternatively, the mirrors and all supports could all be made of aluminium, and conduction through sufficiently massive supports relied upon for thermal **homogeneity**. As an example of these concepts, a preliminary design is presented for a spectroscopic instrument, with a 24 in. mirrors and a number of phototubes for **scanning** a stellar spectrum with high resolution. The overall reliability is investigated, on the basis of...

**38/3,K/3 (Item 1 from file: 8)**

DIALOG(R)File 8:Ei Compendex(R)

(c) 2007 Elsevier Eng. Info. Inc. All rts. reserv.

07489110 E.I. No: EIP96093304459

**Title: Comparative sampling molds evaluation**

Author: Pierrard, Laura; Jarry, Philippe; Charbonnier, Jean; Rigaut, Colette

Corporate Source: Pechiney Cent de Recherches de Voreppe, Voreppe, Fr

Conference Title: Proceedings of the 1996 125th TMS Annual Meeting

Conference Location: Anaheim, CA, USA Conference Date:

19960204-19960208

E.I. Conference No.: 45234

Source: Light Metals Light Metals: Proceedings of Sessions, TMS Annual Meeting (Warrendale, Pennsylvania) 1996. Minerals, Metals & Materials Soc (TMS), Warrendale, PA, USA. p 623-630

Publication Year: 1996

CODEN: LMPMDF ISSN: 0147-0809

Language: English

...Abstract: are required. Both accuracy and precision of the analytical results are limited by the non **homogeneity** of as-cast disk or cylinder samples, which results from macrosegregation phenomenon. This paper presents...

...using the Simulor software, Experimental characterizations. Radial and axial segregation profiles are determined by Analytical **Scanning** Electron Microscopy in addition to analytical **precision evaluation** by spark **optical** emission and X-Ray fluorescence spectrometries for a given machining depth. (Author abstract) 12 Refs.

**38/3,K/4 (Item 2 from file: 8)**

DIALOG(R)File 8:Ei Compendex(R)

(c) 2007 Elsevier Eng. Info. Inc. All rts. reserv.

07207246 E.I. No: EIP95072779410

**Title: Ultrahigh precision measurements of optical heterogeneity of high quality fused silica**

Author: De Freitas, J.M.; Player, M.A.

Corporate Source: Univ of Aberdeen, Aberdeen, Scotl

Source: Applied Physics Letters v 66 n 26 Jun 26 1995. p 3552-3554

Publication Year: 1995

CODEN: APPLAB ISSN: 0003-6951

Language: English

**Title: Ultrahigh precision measurements of optical heterogeneity of high quality fused silica**

...Abstract: at the  $10^{-8}$  level were presented. The measurements were performed on a unique **scanning** heterodyne interferometer developed to screen gyroscope blanks for the Gravity Probe-B experiment. A significant...

...over a regular grid, achieving in the process, a genuine picture of the refractive index **gradient**, or tilt formation. Features at the 5 nm level of optical path difference was explicitly...

Descriptors: \*Fused silica; Refractive index; Optical variables measurement; Interferometers; **Scanning**; Computer applications; Thermal variables control

Identifiers: **Optical** heterogeneity; Ultrahigh **precision measurement**; **Optical** path difference; Thermal drifts; Thermal coefficients; Striae

**38/3,K/5 (Item 1 from file: 144)**

DIALOG(R)File 144:Pascal

(c) 2007 INIST/CNRS. All rts. reserv.

15351769 PASCAL No.: 02-0038920

**High precision interferometric shape measurement of objects with areas of different reflectance**

**Metrology-based control for micro-manufacturing : San Jose CA, 24-25 January 2001**

SCHMIT Joanna; HARASAKI Akiko

TOBIN Kenneth W, ed; LAKHANI Fred, ed

Veeco Metrology, 2650 E Elvira Road, Tucson, AZ 85706, United States

International Society for Optical Engineering, Bellingham WA, United States

Metrology-based control for micro-manufacturing. Conference (San Jose CA USA) 2001-01-24

Journal: SPIE proceedings series, 2001, 4275 85-93

Language: English

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Non-contact, high precision interferometric techniques like phase shifting interferometry (PSI), vertical **scanning** interferometry (VSI) and a VSI and PSI combination are commonly used for surface topography measurement. In order to obtain quality object surface data these techniques rely on both high fringe **contrast** and maximum intensity, which occur when the beams reflected from the reference and object surfaces...

English Descriptors: Microelectronic fabrication; Surface topography; Flip chip; Profilometry; Shape **measurement**; **Optical** interferometry; High **precision**; Object detection; Reflectance; Phase shifting interferometry; Obstacle wave interaction; Wave reflection; Measurement technique; Experimental result

?

**43/3,K/1 (Item 1 from file: 2)**

DIALOG(R)File 2:INSPEC

(c) 2007 Institution of Electrical Engineers. All rts. reserv.

04356626 INSPEC Abstract Number: A89051136, B89034710

**Title: Video microscopic image processing facilities the evaluation of light microscopic autoradiography at high magnification**

Author(s): Montag, M.; Trendelenburg, M.F.; Spring, H.

Author Affiliation: Inst. of Exp. Pathology, German Cancer Res. Center, Heidelberg, West Germany

Journal: Journal of Microscopy. vol.150, pt.3 p.245-9

Publication Date: June 1988 Country of Publication: UK

CODEN: JMICAR ISSN: 0022-2720

U.S. Copyright Clearance Center Code: 0022-2720/88/\$03.00

Language: English

Subfile: A B

**Title: Video microscopic image processing facilities the evaluation of light microscopic autoradiography at high magnification**

...Abstract: unstained semithin sections of *Xenopus laevis* embryonic nuclei were examined with conventional Nomarski differential interference **contrast**, phase- **contrast** and video microscopy. Whereas at low magnification it was possible to obtain a photograph of...

... and the silver grains in one focal plain, at high magnification, with small depths of **focus**, a satisfactory image was not attainable. Therefore, the authors stored the images of the two different **focus** levels with a digital image processing system and combined both images by an arithmetic operation...

...of high magnification light microscopy with oil immersion objectives and the application of additional electronic **contrast** enhancing methods for an adequate and rapid analysis of light microscopic autoradiographs.

...Descriptors: radioisotope **scanning** and imaging...

Identifiers: **video microscopic image** processing...

...electronic **contrast** enhancement...

...Nomarski differential interference **contrast**; ...

...phase- **contrast**;

43/3,K/2 (Item 2 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2007 Institution of Electrical Engineers. All rts. reserv.

01722454 INSPEC Abstract Number: B75006818

**Title: Transfer functions for Xeroradiographs and electronic image enhancement systems**

Author(s): Kilgore, R.A.; Gregg, E.C.; Rao, P.S.

Author Affiliation: Case Western Reserve Univ., Cleveland, OH, USA

Conference Title: Application of Optical Instrumentation in Medicine. 2nd seminar p.55-8

Editor(s): Hendee, W.R.; Zarnstorff, W.C.

Publisher: Soc. Photo-Optical Instrumentation Engrs, Redondo Beach, CA, USA

Publication Date: 1974 Country of Publication: USA xii+246 pp.

Conference Sponsor: Soc. Photo-optical Instrumentation Engrs.; et al

Conference Date: 29-30 Nov. 1973 Conference Location: Chicago, IL, USA

Language: English  
Subfile: A B

**Abstract:** It is possible to simulate the transfer function of Xeroradiography with several simple 2-dimensional **video image** manipulation systems. One system is a video disc recording system whereby an optically defocused image is stored and subtracted from the normal in-focus image. This produces harmonization and results in a certain amount of contour enhancement. A disadvantage...

... spot to expose small segments of the image so controlled that the velocity of the **scanning** spot is proportional to the light intensity measured behind the contact printer frame.

...Identifiers: **video image** manipulation system...

... **contrast**

**43/3,K/3 (Item 1 from file: 34)**

DIALOG(R)File 34:SciSearch(R) Cited Ref Sci  
(c) 2007 The Thomson Corp. All rts. reserv.

03550427 Genuine Article#: PL640 No. References: 42

**Title: HIGH TEMPORAL AND SPATIAL-RESOLUTION STUDIES OF BONE-CELLS USING REAL-TIME CONFOCAL REFLECTION MICROSCOPY**

Author(s): BOYDE A; VESELY P; GRAY C; JONES SJ

Corporate Source: UNIV LONDON UNIV COLL,DEPT ANAT & DEV BIOL,GOWER ST/LONDON WC1E 6BT//ENGLAND/

Journal: SCANNING, 1994, V16, N5 (SEP-OCT), P285-294

ISSN: 0161-0457

Language: ENGLISH Document Type: ARTICLE (Abstract Available)

...Abstract: were selected and studied at 37 degrees C using three different types of high-speed **scanning** confocal microscopes: (1) A Noran Tandem **Scanning** Microscope (TSM) was used with a low light level, cooled CCD **camera** for **image** transfer to a Noran TN8502 frame store-based image analysing computer to make time lapse...

...thus losing some of the advantage of the high frame rate of the TSM, Rapid **focus** adjustment using computer controlled piezo drivers permitted two or more **focus** planes to be imaged sequentially: thus (with additional light-source shuttering) the reflection confocal image could be alternated with the phase **contrast** image at a different **focus**. Individual cells were followed for up to 5 days, suggesting no significant irradiation problem. (2) Exceptional temporal and spatial resolution is available in video rate laser confocal **scanning** microscopes (VRCSLMs). We used the Noran Odyssey unitary beam VRCSLM with an argon ion laser...

...within bone cells. The interference reflection mode gives particularly strong contrasts in confocal instruments. Phase **contrast** and other interference methods used in the microscopy of living cells can be used simultaneously...

**43/3,K/4 (Item 1 from file: 35)**

DIALOG(R)File 35:Dissertation Abs Online  
(c) 2007 ProQuest Info&Learning. All rts. reserv.

01380437 ORDER NO: AADMM-87072

**A FLAT PANEL DETECTOR FOR DIGITAL RADIOLOGY USING SELF- SCANNED  
READOUT OF**

**X-RAY PHOTOCONDUCTOR: FUNDAMENTAL STUDY OF FEASIBILITY**

Author: ZHAO, WEI

Degree: M.SC.

Year: 1993

Corporate Source/Institution: UNIVERSITY OF TORONTO (CANADA) (0779)

Source: VOLUME 32/06 of MASTERS ABSTRACTS.

PAGE 1605. 102 PAGES

ISBN: 0-315-87072-9

**A FLAT PANEL DETECTOR FOR DIGITAL RADIOLOGY USING SELF- SCANNED  
READOUT OF**

**X-RAY PHOTOCONDUCTOR: FUNDAMENTAL STUDY OF FEASIBILITY**

...better detective quantum efficiency than phosphor screen based systems. Its advantages over the x-ray **image** intensifier (XRII)/ **video** systems for fluoroscopy include: compactness; no geometric image distortion; better image **contrast** and resolution. The feasibility of the detector for digital radiology was investigated based on the...

...not quantum noise limited below the mean exposure rate typically used in fluoroscopy. Thus the **focus** of our future work is to overcome the practical difficulties in making the detector feasible...

**43/3,K/5 (Item 1 from file: 144)**

DIALOG(R)File 144:Pascal

(c) 2007 INIST/CNRS. All rts. reserv.

01864510 PASCAL No.: 78-0460215

**AN EDGE-ENHANCING DOUBLE- FOCUS CAMERA FOR IMAGE PROCESSING  
BAIG W G**

PHILIPS RES. LAB., EINDHOVEN, NETHERLANDS

Journal: PHILIPS TECH. REV., 1977, 37 (7) 180-187

Language: ENGLISH

**AN EDGE-ENHANCING DOUBLE- FOCUS CAMERA FOR IMAGE PROCESSING**

English Descriptors: **SCANNING** ; **CAMERA** ; **CONTRAST** ; EDGE DETECTION;  
**IMAGE** ; READING; CHARACTER RECOGNITION; PATTERN RECOGNITION; IMAGE  
RECOGNITION; DATA REDUCTION; IMAGE PROCESSING

French Descriptors: TRAITEMENT **IMAGE** ; **CAMERA** ; **IMAGE** ; CONTRASTE;  
LECTURE; BALAYAGE; REDUCTION DONNEE; RECONNAISSANCE CARACTERE;  
RECONNAISSANCE FORME; DETECTION BORD; RECONNAISSANCE IMAGE

**43/3,K/6 (Item 1 from file: 248)**

DIALOG(R)File 248:PIRA

(c) 2007 Pira International. All rts. reserv.

00247175 Pira Acc. Num.: 40303363

**Title: AUTOMATIC FOCUS ADJUSTING SYSTEM**

Authors: Osawa N

Patent Assignee: NIHON BERU-HAUERU K.K.

Patent Number: US 4146316 Application Date: 770421

Document Type: Patent

Language: unspecified

**Title: AUTOMATIC FOCUS ADJUSTING SYSTEM**

...Abstract: OF THE SYSTEM FOR DETERMINING OBJECT DISTANCE OF A REMOTE SUBJECT BY COMPARING IMAGES OF **SCANNING** AND REFERENCE OPTICAL SYSTEMS. THE SCANNER OF THE OPTICAL SYSTEM IS DRIVEN OSCILLATABLY ACROSS AN ANGLE TO

DETECT A SUBJECT BETWEEN INFINITY AND THE MINIMUM **FOCUS** CONDITION OF THE OBJECTIVE LENS. THE PRESENT INVENTION RELATES TO IMPROVEMENTS IN AN AUTOMATIC FOCUSING...

... OBJECTIVE. MORE PARTICULARLY, THE IMPROVEMENT RELATES TO DRIVING THE FOCUSING SYSTEM TO A PRESET FIXED **FOCUS** SETTING WHEN THE SYSTEM SENSES DIFFICULT CONDITIONS FOR **FOCUS** DETECTION AS THOSE HAVING LOW **CONTRAST** OR COMPLEX SUBJECT MATTER. A WARNING DEVICE IS INCLUDED TO BE ACTIVATED THEREBY CAUTIONING THE OPERATOR THAT THE AUTOMATIC **FOCUS** SYSTEM HAS REACHED ITS OPERATIONAL LIMIT. HOWEVER, THE REPEATED OCCURRENCES OF IRREGULAR OR ERROR SIGNALS...

Section Headings: **CAMERA ACCESSORIES - LENSES AND PHOTOGRAPHIC OPTICS**  
(6015)

**43/3,K/7 (Item 2 from file: 248)**

DIALOG(R)File 248:PIRA

(c) 2007 Pira International. All rts. reserv.

00243313 Pira Acc. Num.: 40202487

**Title: AUTOMATIC FOCUSING APPARATUS**

Authors: Takeda H

Patent Assignee: ASAHI KOGAKU KOGYO K.K.

Patent Number: US 3849643 Application Date: 721130

Document Type: Patent

Language: unspecified

...Abstract: LENS. THE LENS AND THE PLANE ARE MOVABLE RELATIVE TO EACH OTHER SO AS TO **FOCUS** THE IMAGE. A TWO-DIMENSIONAL DIFFRACTION GRATING, PREFERABLY OF THE PHASE GRATING TYPE, IS DISPOSED IN THE OPTICAL PATH AT A DISTANCE SPACED AWAY FROM THE PLANE. A **SCANNING** MECHANISM IS PROVIDED INCLUDING A PLATE DISPOSED BETWEEN THE DIFFRACTION GRATING AND THE PLANE, AND...

...WHICH PROVIDES AN ELECTRICAL SIGNAL USED IN A POSITIONING MECHANISM THAT PROVIDES FOR MAXIMIZING THE **CONTRAST** OF THE IMAGE FORMED BY THE LIGHT PASSING THROUGH THE DIFFRACTION GRATING AND IMPINGING ON THE PHOTOELECTRIC ELEMENT SO AS TO BRING THE IMAGE INTO **FOCUS**.

Section Headings: **CAMERA ACCESSORIES - LENSES AND PHOTOGRAPHIC OPTICS**  
(6015)

?



54/3,K/1 (Item 1 from file: 34)

DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

(c) 2007 The Thomson Corp. All rts. reserv.

13781935 Genuine Article#: 910ZV No. References: 17

**Title: Simultaneous measurement of three-dimensional joint kinematics and ligament strains with optical methods**

Author(s): Lujan TJ; Lake SP; Plaizier TA; Ellis BJ; Weiss JA (REPRINT)

Corporate Source: Univ Utah,Dept Bioengn,Salt Lake City//UT/84112 (REPRINT)

; Univ Utah,Dept Bioengn,Salt Lake City//UT/84112; Univ Utah,Dept

Orthoped,Salt Lake City//UT/84112; Univ Utah,Sci Comp & Imaging

Inst,Salt Lake City//UT/84112(jeff.weiss@utah.edu)

Journal: JOURNAL OF BIOMECHANICAL ENGINEERING-TRANSACTIONS OF THE ASME, 2005, V127, N1 (FEB), P193-197

ISSN: 0148-0731 Publication date: 20050200

Publisher: ASME-AMER SOC MECHANICAL ENG, THREE PARK AVE, NEW YORK, NY 10016-5990 USA

Language: English Document Type: ARTICLE (ABSTRACT AVAILABLE)

...Abstract: consisted of two high-resolution digital cameras and software for calculating the 3D coordinates of **contrast** markers. System precision was assessed by examining the variation in the coordinates of static markers over time. Three-dimensional strain measurement accuracy was assessed by moving **contrast** markers fixed distances in the field of view and calculating the error in predicted strain...

...angle. Absolute error in strain measurement varied from a minimum of +/- 0.025% to a **maximum** of +/-0.142%, depending on the angle between cameras and the direction of strain with...

?

#### PATENT FILES

File 344:Chinese Patents Abs Jan 1985-2006/Jan

(c) 2006 European Patent Office

File 347:JAPIO Dec 1976-2006/Nov(Updated 070228)

(c) 2007 JPO & JAPIO

File 350:Derwent WPIX 1963-2006/UD=200719

(c) 2007 The Thomson Corporation

Set Items Description

S1 119823 (IMAGE?? OR PHOTOGRAPH?? OR PHOTO??)(3N)(VIDEO OR CAMERA)

S2 626 OPTICAL(3N)(PRECISION OR PRECISENESS)(3N)(MEASUR? OR EVALU-  
AT? OR CALCULAT? OR DETERMIN? OR INSPECT???)

S3 25 ANCILLARY(3N)(PARAMETER? OR VALUES)

S4 267412 CONTRAST OR HOMOGENEITY OR MEAN()BRIGHTNESS OR BRIGHTNESS -  
OR GRADIENT?

S5 9 INFLUENCE()QUANTITIES

S6 1077148 WEIGHT? OR WEIGH? OR RANK?

S7 48587 S6(3N)(SUMM OR SUMM OR INTEGRATING OR ACCUMULAT? OR SUMMAT-  
ION OR TOTAL)

S8 3102 TARGET(3N)FUNCTION??

S9 1 S3(3N)(ALL OR TOTAL)

S10 1 (EXTREMUM OR MAXIMUM)(3N)FUNCTIONAL()DEPENDENCY

S11 46 AU=(NEHSE, U? OR LINSS, G? OR KUHN, O? OR NEHSE U? OR LINSS  
G? OR KUHN O?)

S12 247976 WAVELENGTH?? OR WAVE()LENGTH??

S13 205894 2D OR (2 OR TWO)(3N)(STRUCTURE? OR DIMENSION?)

S14 147020 WORKPIECE??  
 S15 292708 SCANNED OR SCANS OR SCANNING  
 S16 186 TARGET(3N)QUANTITIES  
 S17 9 S9 OR S10 OR S5  
 S18 1 S17 AND (S1 OR S2)  
 S19 1 S11 AND S2  
 S20 0 S19 NOT S18  
 S21 11 S2 AND (S3 OR S4)  
 S22 1 S21 AND (S7 OR S8)  
 S23 0 S22 NOT S18  
 S24 6 S21 AND S12:S16  
 S25 5 S24 NOT S18  
 S26 0 S21 AND S1  
 S27 26 S2 AND FOCUS  
 S28 4 S27 AND (EXTREMUM OR MAXIMUM)  
 S29 3 S28 NOT (S24 OR S18)  
 S30 2 S29 NOT FIBER  
 S31 1 S2 AND S8  
 S32 0 S31 NOT S18

**18/3,K/1 (Item 1 from file: 350)**

DIALOG(R)File 350:Derwent WPIX

(c) 2007 The Thomson Corporation. All rts. reserv.

0013095905 - Drawing available

WPI ACC NO: 2003-177008/200318

XRPX Acc No: N2003-139192

**Automatic regulation of focus and lighting and optical sensing of edge position for precision optical measurement involves determining weighted sum of individual auxiliary parameters**

Patent Assignee: KUHN O (KUHN-I); LINSS G (LINS-I); NEHSE U (NEHS-I); ZEISS CARL (ZEIS); ZEISS IND MESSTECHNIK GMBH CARL (ZEIS); ZEISS STIFTUNG T/A CARL ZEISS (ZEIS)

Inventor: KUEHN O; KUHN O; LINSS G; NEHSE U

**Patent Family** (5 patents, 22 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update
DE 10215135	A1	20021024	DE 10215135	A	20020405	200318 B
WO 2002084215	A1	20021024	WO 2002EP3921	A	20020409	200318 E
EP 1379835	A1	20040114	EP 2002747265	A	20020409	200410 E
			WO 2002EP3921	A	20020409	
US 20040131244	A1	20040708	WO 2002EP3921	A	20020409	200445 E
			US 2003687914	A	20031020	
DE 20221476	U1	20060330	DE 20221476	U	20020405	200623 E
			DE 10215135	U	20020405	

*same applicants*

Priority Applications (no., kind, date): DE 10119026 A 20010418; DE 10140640 A 20010818

**Patent Details**

Number Kind Lan Pg Dwg Filing Notes

DE 10215135 A1 DE 16 7

WO 2002084215 A1 DE

National Designated States,Original: DE JP US

Regional Designated States,Original: AT BE CH CY DE DK ES FI FR GB GR IE

IT LU MC NL PT SE TR  
 EP 1379835 A1 DE PCT Application WO 2002EP3921  
 Based on OPI patent WO 2002084215  
 Regional Designated States, Original: AT BE CH CY DE DK ES FI FR GB GR IE  
 IT LI LU MC NL PT SE TR  
 US 20040131244 A1 EN Continuation of application WO  
 2002EP3921  
 DE 20221476 U1 DE Based on application DE 10215135

**Automatic regulation of focus and lighting and optical sensing of edge position for precision optical measurement involves determining weighted sum of individual auxiliary parameters**

**Original Titles:**

...FOR AUTOMATIC ADJUSTMENT OF FOCUS AND LIGHTING AND FOR OBJECTIVATED SCANNING OF EDGE SITE IN **OPTICAL PRECISION MEASURING TECHNIQUE...**

...Method of optimizing target quantities for **optical precision measurement** and apparatus therefor...

...FOR AUTOMATIC ADJUSTMENT OF FOCUS AND LIGHTING AND FOR OBJECTIVATED SCANNING OF EDGE SITE IN **OPTICAL PRECISION MEASURING TECHNIQUE...**

**Alerting Abstract ...NOVELTY** - The method involves optimizing **optical precision measurement** target parameters by deriving auxiliary parameters from image information and deriving control information for influencing...

...USE - For automatic regulation of focus and lighting and **optical** sensing of edge position for **precision optical measurement**.

**Original Publication Data by Authority**

**Original Abstracts:**

...wherein auxiliary parameters are obtained from image information of a work piece that is to **be measured and** control information for influencing variables of the target variables are derived from said auxiliary parameters...

...data of a workpiece which is to be measured. Control data for influence quantities of **the target quantities** are derived from the ancillary parameters. The control data is derived as follows: by determining the courses of **the ancillary** parameters depending on at least one influence quantity and the courses of the ancillary parameters...

...is determined and an extremum of the overall course of the ancillary parameters is determined. **Corresponding values** of the influence quantities are determined at the site of the determined extremum as control data for the influence quantity.

...

...be measured and control information for influencing variables of the target variables are derived from **said auxiliary parameters**. The control information is derived as follows: by determining the characteristic curves of the auxiliary

**Claims:**

...determining a weighted summation of the individual ones of said ancillary parameters for the target **function to be optimized**; and, determining all ancillary parameters in such a manner that they have a like extremum of the functional **dependency of the influence quantities**.  
?

**25/3,K/1 (Item 1 from file: 347)**

DIALOG(R)File 347:JAPIO

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08636635 \*\*Image available\*\*

OPTICAL METHOD AND INSTRUMENT FOR MEASURING PHYSICAL QUANTITY

PUB. NO.: 2006-029995 [JP 2006029995 A]

PUBLISHED: February 02, 2006 (20060202)

INVENTOR(s): SAKAMOTO AKIRA

OKUDE SATOSHI

APPLICANT(s): FUJIKURA LTD

APPL. NO.: 2004-209546 [JP 2004209546]

FILED: July 16, 2004 (20040716)

**ABSTRACT**

**PROBLEM TO BE SOLVED:** To provide an **optical** physical quantity **measuring** instrument of high **measuring precision** by simple constitution.

**SOLUTION:** Light from a light source 11 is received by a slant type grating 13 to make transmission light intensity changed inclinedly within a **gradient wavelength** range in response to a **wavelength** getting long, the light from the slant type grating 13 is received by a Bragg grating 15 to transmit the light having one characteristic of a prescribed **wavelength** width within the **gradient wavelength** range, the light from the Bragg grating 15 is received by a photoreception part 17...

**25/3,K/2 (Item 2 from file: 347)**

DIALOG(R)File 347:JAPIO

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01885704 \*\*Image available\*\*

SHEAR ORIGIN DETECTING METHOD OF FRINGE SCANNING SHEARING INTERFEROMETER

PUB. NO.: 61-099804 [JP 61099804 A]

PUBLISHED: May 17, 1986 (19860517)

INVENTOR(s): KITABAYASHI JUNICHI

APPLICANT(s): RICOH CO LTD [000674] (A Japanese Company or Corporation), JP (Japan)

APPL. NO.: 59-221754 [JP 84221754]

FILED: October 22, 1984 (19841022)

JOURNAL: Section: P, Section No. 499, Vol. 10, No. 278, Pg. 95,  
September 20, 1986 (19860920)

SHEAR ORIGIN DETECTING METHOD OF FRINGE SCANNING SHEARING INTERFEROMETER

## ABSTRACT

... To improve the measurement precision of a surface to be measured by integrating a normalized **brightness** distribution in a **scanning** direction and finding a shear position where the total on each **scanning** line is maximum as the origin position on shear...

...from 0 to N and integrated values L(i) are totalized as to all main **scanning** lines according to an equation. Then, the quantity of shear is varied almost where shear...

... the thermal expansion of a shear driving part or external oscillation, so even if an **optical** element shifts in position, the **measurement precision** of the surface to be measured is improved.

**25/3,K/3 (Item 1 from file: 350)**

DIALOG(R)File 350:Derwent WPIX

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0014753655

WPI ACC NO: 2005-101287/200511

Related WPI Acc No: 2003-659508

XRAM Acc No: C2005-033842

XRPX Acc No: N2005-087983

**System for measuring phase of light passing through portion of sample, e.g. nerve/cancerous tissues or semiconductor wafer comprises superluminescent/multimode laser diodes, heterodyne Michelson interferometer and detector system**

Patent Assignee: MASSACHUSETTS INST TECHNOLOGY (MASI)

Inventor: DASARI R; DASARI R R; FANG-YEN C; FANG-YEN C M; FELD M; FELD M S;

POPESCU G; WAX A; WAX A P; YANG C

**Patent Family** (5 patents, 107 countries)

Patent

Application

Number	Kind	Date	Number	Kind	Date	Update
WO 2005001445	A2	20050106	WO 2004US19456	A	20040618	200511 B
US 20050057756	A1	20050317	US 200124455	A	20011218	200521 E
			US 2003479732	P	20030619	
			US 2004823389	A	20040413	
US 20050105097	A1	20050519	US 200124455	A	20011218	200534 E
			US 2003479732	P	20030619	
			US 2004823389	A	20040413	
			US 2004871610	A	20040618	
EP 1644720	A2	20060412	EP 2004776731	A	20040618	200626 E
			WO 2004US19456	A	20040618	
CN 1826518	A	20060830	CN 200480020838	A	20040618	200682 E

Priority Applications (no., kind, date): US 200124455 A 20011218; US 2003479732 P 20030619; US 2004823389 A 20040413; US 2004871610 A 20040618

## Patent Details

Number Kind Lan Pg Dwg Filing Notes

WO 2005001445 A2 EN 172 69

National Designated States,Original: AE AG AL AM AT AU AZ BA BB BG BR BW

BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE EG ES FI GB GD GE GH GM HR

HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW

MX MZ NA NI NO NZ OM PG PH PL PT RO RU SC SD SE SG SK SL SY TJ TM TN TR

TT TZ UA UG UZ VC VN YU ZA ZM ZW  
 Regional Designated States,Original: AT BE BG BW CH CY CZ DE DK EA EE ES  
 FI FR GB GH GM GR HU IE IT KE LS LU MC MW MZ NA NL OA PL PT RO SD SE SI  
 SK SL SZ TR TZ UG ZM ZW  
 US 20050057756 A1 EN C-I-P of application US 200124455  
 Related to Provisional US 2003479732  
 US 20050105097 A1 EN C-I-P of application US 200124455  
 Related to Provisional US 2003479732  
 C-I-P of application US 2004823389  
 EP 1644720 A2 EN PCT Application WO 2004US19456  
 Based on OPI patent WO 2005001445  
 Regional Designated States,Original: AL AT BE BG CH CY CZ DE DK EE ES FI  
 FR GB GR HR HU IE IT LI LT LU LV MC MK NL PL PT RO SE SI SK TR

**Alerting Abstract** ...of phase noise and assist in developing different imaging applications. As the system/method can **measure** long **optical** distances with **precision** , it can be used to determine refractive indices of a number of materials accurately. As...

#### Original Publication Data by Authority

#### Original Abstracts:

...using the existing methods and technologies including, for example, x-ray and neutron scattering. In **contrast** , light based techniques with nanometer resolution enable the cellular machinery to be studied in its ... using the existing methods and technologies including, for example, x-ray and neutron scattering. In **contrast** , light based techniques with nanometer resolution enable the cellular machinery to be studied in its native state. Thus, preferr...using the existing methods and technologies including, for example, x-ray and neutron scattering. In contrast, light based techniques with nanometer resolution enable the cellular machinery to be studied in its native state. Thus, preferr...using the existing methods and technologies including, for example, x-ray and neutron scattering. In contrast, light based techniques with nanometer resolution enable the cellular machinery to be studied in its native state. Thus, preferr...

#### Claims:

...light passing through a portion of a sample comprising the steps of:providing a first **wavelength** of light;directing light of the first **wavelength** along a first optical path and a second optical path, the first optical path extending...

...light passing through a portion of a medium comprising the steps of:providing a first **wavelength** of light;directing light of the first **wavelength** along a first optical path and a second optical path, the first optical path extending...

25/3,K/4 (Item 2 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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0009433860 - Drawing available

WPI ACC NO: 1999-372354/199932

XRPX Acc No: N1999-277759

Optical precision measuring device for measuring various parameters

of workpieces during manufacture

Patent Assignee: HUHNE B (HUHN-I)

Inventor: HUHNE B

Patent Family (1 patents, 1 countries)

Patent

Application

Number	Kind	Date	Number	Kind	Date	Update
DE 19758214	A1	19990701	DE 19758214	A	19971231	199932 B

Priority Applications (no., kind, date): DE 19758214 A 19971231

#### Patent Details

Number	Kind	Lan	Pg	Dwg	Filing	Notes
DE 19758214	A1	DE	6	2		

Optical precision measuring device for measuring various parameters of workpieces during manufacture

**Alerting Abstract** ...NOVELTY - The device evaluates the two - dimensional Fresnel diffraction pattern which occurs in a distance sensor due to laser illumination of objects. Evaluation is performed with respect to rising **gradient**, attenuation, spatial frequency and height. USE - For measuring the edge position, edge **gradient**, roughness, diameter, etc. using a distance sensor, CCD, etc...

**Title Terms**.../Index Terms/Additional Words: **WORKPIECE** ;

25/3,K/5 (Item 3 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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0007998185 - Drawing available

WPI ACC NO: 1997-090375/199709

XRPX Acc No: N1997-074316

**Polarisation interferometer for two - dimensional data acquisition appts.**

- has quarter wavelength plate utilised in rotating plane of linearly polarised incidence light in arbitrary direction around optical axis

Patent Assignee: SHIMADZU CORP (SHMA)

Inventor: KAWADA M

Patent Family (1 patents, 1 countries)

Patent

Application

Number	Kind	Date	Number	Kind	Date	Update
JP 8327453	A	19961213	JP 1995130822	A	19950529	199709 B

Priority Applications (no., kind, date): JP 1995130822 A 19950529

#### Patent Details

Number	Kind	Lan	Pg	Dwg	Filing	Notes
JP 8327453	A	JA	5	6		

**Polarisation interferometer for two - dimensional data acquisition appts**

...

...has quarter wavelength plate utilised in rotating plane of linearly polarised incidence light in arbitrary direction around optical...

**Alerting Abstract** ...incidence light is rotated in an arbitrary direction

around the optical axis through a quarter **wavelength** plate (QWP3...

...proportion by rotating plane of incidence light in arbitrary direction around optical axis, thus improving **contrast** of linearly polarised incidence light. Attains bright image even when utilising small light output by eliminating utilisation of filter, thus **measurement precision** is improved and reduces size of **measurement optical** system.

**Title Terms.../Index Terms/Additional Words: WAVELENGTH ;**

?

**30/3,K/1 (Item 1 from file: 347)**

DIALOG(R)File 347:JAPIO

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08509474 **\*\*Image available\*\***

ELECTRONIC ENDOSCOPE DEVICE PROVIDED WITH AUTO- **FOCUS** FUNCTION

PUB. NO.: 2005-257734 [JP 2005257734 A]

PUBLISHED: September 22, 2005 (20050922)

INVENTOR(s): MINAMI TOSHIJI

APPLICANT(s): FUJINON CORP

APPL. NO.: 2004-065278 [JP 200465278]

FILED: March 09, 2004 (20040309)

ELECTRONIC ENDOSCOPE DEVICE PROVIDED WITH AUTO- **FOCUS** FUNCTION

#### ABSTRACT

**PROBLEM TO BE SOLVED:** To obtain a well focused image by raising the distance **measurement precision** at the time of **optical** enlargement.

**SOLUTION:** A microcomputer 42 is provided with a distance measurement area setting part 42a...

...an observation visual field to be imaged by a CCD 25 and a passive auto-**focus** control part 42a. The distance measurement area setting part 42a sets a small area (reference...

... enlarging and outputs a high frequency signal of the distance measurement area to the auto- **focus** control part 52b. The auto- **focus** control part 42b performs **focus** evaluation operation in accordance with the high frequency signal of the distance measurement area outputted...

... and mainly performs a climbing operation of moving a first movable lens 23 toward a **maximum** evaluation point ( **maximum focus** voltage).

**COPYRIGHT:** (C)2005,JPO&NCIPI

**30/3,K/2 (Item 2 from file: 347)**

DIALOG(R)File 347:JAPIO

(c) 2007 JPO & JAPIO. All rts. reserv.

07809312 **\*\*Image available\*\***

METHOD AND DEVICE FOR EVALUATING **FOCUS** OFFSET



PUB. NO.: 2003-303426 [JP 2003303426 A]  
PUBLISHED: October 24, 2003 (20031024)  
INVENTOR(s): MURAKAMI SHINZO  
APPLICANT(s): SHARP CORP  
APPL. NO.: 2002-103744 [JP 2002103744]  
FILED: April 05, 2002 (20020405)

## METHOD AND DEVICE FOR EVALUATING FOCUS OFFSET

### ABSTRACT

**PROBLEM TO BE SOLVED:** To provide a **focus** offset evaluating method and device in which **focus** offset of an optical pickup device and an **optical** integrating unit can be **evaluated** with high **precision**.

**SOLUTION:** In this **focus** offset evaluating method, a prescribed **focus** bias signal is impressed to a **focus** error signal, thereby setting a prescribed **focus** bias  $F_n$  in the optical pickup device; and, on the basis of a relation between the **focus** bias  $F_n$  and an amplitude  $T_n$  of a tangential push/pull signal or the jitter  $J_n$  of a clock signal formed by the tangential push/pull signal, the **extremum** of the amplitude  $T_n$  or the jitter  $J_n$  is determined, with the **focus** bias corresponding to this **extremum** specified as the **focus** offset of the optical pickup device or the optical integrating unit.

COPYRIGHT: (C)2004,JPO

### FOREIGN PATENTS FULLTEXT

File 348:EUROPEAN PATENTS 1978-2007/ 200708

(c) 2007 European Patent Office

File 349:PCT FULLTEXT 1979-2007/UB=20070315UT=20070308

(c) 2007 WIPO/Thomson

Set	Items	Description
S1	61734	(IMAGE?? OR PHOTOGRAPH?? OR PHOTO??)(3N)(VIDEO OR CAMERA)
S2	333	OPTICAL(3N)(PRECISION OR PRECISENESS)(3N)(MEASUR? OR EVALU- AT? OR CALCULAT? OR DETERMIN? OR INSPECT???)
S3	106	ANCILLARY(3N)(PARAMETER? OR VALUES)
S4	451590	CONTRAST OR HOMOGENEITY OR MEAN()BRIGHTNESS OR BRIGHTNESS - OR GRADIENT?
S5	7	INFLUENCE()QUANTITIES
S6	761464	WEIGHT? OR WEIGH? OR RANK?
S7	121116	S6(3N)(SUMM OR SUMM OR INTEGRATING OR ACCUMULAT? OR SUMMAT- ION OR TOTAL)
S8	10825	TARGET(3N)FUNCTION??
S9	3	S3(3N)(ALL OR TOTAL)
S10	0	(EXTREMUM OR MAXIMUM)(3N)FUNCTIONAL()DEPENDENCY
S11	28	AU=(NEHSE, U? OR LINSS, G? OR KUHN, O? OR NEHSE U? OR LINSS G? OR KUHN O?)
S12	174776	WAVELENGTH?? OR WAVE()LENGTH??
S13	327980	2D OR (2 OR TWO)(3N)(STRUCTURE? OR DIMENSION?)
S14	31829	WORKPIECE??
S15	195393	SCANNED OR SCANS OR SCANNING

S16 973 TARGET(3N)QUANTITIES  
 S17 1 S11 AND S2  
 S18 8 S2(S)(S3 OR S4)  
 S19 0 S18(S)(S5 OR S7 OR S8)  
 S20 0 S18(S)S14:S16  
 S21 0 S18(S)S9  
 S22 8 S18 NOT S17  
 S23 0 S22 AND IC=G06K?  
 S24 0 S2(S)S8  
 S25 0 S2(S)S16  
 S26 7 S2(S)(EXTREMUM OR MAXIMUM)  
 S27 7 S26 NOT S17  
 S28 0 S27 AND IC=G06K?  
 S29 1 S27(S)(S1 OR S15)

**17/3,K/1 (Item 1 from file: 348)**

DIALOG(R)File 348:EUROPEAN PATENTS

(c) 2007 European Patent Office. All rts. reserv.

01518612

**METHOD FOR AUTOMATIC ADJUSTMENT OF FOCUS AND LIGHTING AND FOR OBJECTIVATED**

**SCANNING OF EDGE SITE IN OPTICAL PRECISION MEASURING TECHNIQUE  
VERFAHREN ZUR AUTOMATISCHEN REGELUNG VON FOKUS UND BELEUCHTUNG,  
SOWIE ZUR**

**OBJEKTIVIERTEN ANTASTUNG DES KANTENORTES IN DER OPTISCHEN  
PRAZISIONSMESSTECHNIK**

**PROCEDE DE REGLAGE AUTOMATIQUE DE LA DISTANCE FOCAL ET DE  
L'ECLAIRAGE,**

**AINSI QUE DE DEMARRAGE OBJECTIVE DU PALPAGE DE LA POSITION D'ARETE DANS  
LA TECHNIQUE DE MESURE DE PRECISION OPTIQUE**

PATENT ASSIGNEE:

CARL ZEISS, (217176), , 89518 Heidenheim, (DE), (Applicant designated  
States: all)

INVENTOR:

**NEHSE, Uwe** , Geraer Strasse 2, 98716 Geraberg, (DE)

**LINSS, Gerhard** , Mutental 3, 98529 Suhl, (DE)

**KUHN, Olaf** , Breites Feld 21c, 98528 Suhl, (DE)

LEGAL REPRESENTATIVE:

Henckell, Carsten (133411), Carl Zeiss Patentabteilung, 73446 Oberkochen,  
(DE)

PATENT (CC, No, Kind, Date): EP 1379835 A1 040114 (Basic)

WO 2002084215 021024

APPLICATION (CC, No, Date): EP 2002747265 020409; WO 2002EP3921 020409

PRIORITY (CC, No, Date): DE 10119026 010418; DE 10140640 010818

DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI;  
LU; MC; NL; PT; SE; TR

EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI

INTERNATIONAL PATENT CLASS (V7): G01C-003/32; G01C-011/02

NOTE:

No A-document published by EPO

LANGUAGE (Publication,Procedural,Application): German; German; German

**... FOR AUTOMATIC ADJUSTMENT OF FOCUS AND LIGHTING AND FOR  
OBJECTIVATED**

**SCANNING OF EDGE SITE IN OPTICAL PRECISION MEASURING TECHNIQUE**

INVENTOR:

NEHSE, Uwe ...

...DE)

LINSS, Gerhard ...

...DE)

KUHN, Olaf ...

?

**22/3,K/1 (Item 1 from file: 348)**

DIALOG(R)File 348:EUROPEAN PATENTS

(c) 2007 European Patent Office. All rts. reserv.

01663684

**Laser spectroscopy using a master/slave architecture**

**Laserspektroskopie mittels einer Master-Slave-Steuerungsarchitektur**

**Spectroscopie laser utilisant une architecture maitre-esclave**

PATENT ASSIGNEE:

ITT MANUFACTURING ENTERPRISES, INC., (209959), 1105 North Market Street  
Suite 1217, Wilmington, Delaware 19801, (US), (Proprietor designated  
states: all)

INVENTOR:

Dobbs, Michael E., 10716 Maple Springs Cove, Fort Wayne, Indiana 46818,  
(US)

Wheel, Peter, 57131 Oak Point Drive, Fort Wayne, Indiana 46845, (US)

LEGAL REPRESENTATIVE:

Esser, Wolfgang (75575), ITT Industries Regional Patent Office Europe  
Cannonstrasse 1, 71384 Weinstadt, (DE)

PATENT (CC, No, Kind, Date): EP 1367680 A1 031203 (Basic)

EP 1367680 B1 070117

APPLICATION (CC, No, Date): EP 2003011477 030521;

PRIORITY (CC, No, Date): US 155172 020528

DESIGNATED STATES: AT; BE; BG; CH; CY; CZ; DE; DK; EE; ES; FI; FR; GB; GR;

HU; IE; IT; LI; LU; MC; NL; PT; RO; SE; SI; SK; TR

EXTENDED DESIGNATED STATES: AL; LT; LV; MK

INTERNATIONAL PATENT CLASS (V7): H01S-005/0687; H01S-003/13; G01N-021/39

INTERNATIONAL CLASSIFICATION (V8 + ATTRIBUTES):

IPC + Level Value Position Status Version Action Source Office:

H01S-0005/0687 A I F B 20060101 20030828 H EP

H01S-0003/13 A I L B 20060101 20030828 H EP

G01N-0021/39 A I L B 20060101 20030828 H EP

ABSTRACT WORD COUNT: 169

NOTE:

Figure number on first page: 1

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
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CLAIMS A	(English)	200349	1063
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CLAIMS B	(English)	200703	667
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CLAIMS B	(German)	200703	695
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CLAIMS B	(French)	200703	805
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SPEC A	(English)	200349	4921
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SPEC B	(English)	200703	4967
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Total word count - document A			5986
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Total word count - document B 7134  
Total word count - documents A + B 13120

...SPECIFICATION an optical signal may provide, for example, on the order of one thousand times more **precision** than **measuring** the **optical** signal directly with a wavemeter. As an example, the resolution of a wavemeter at 1.5 (mu)m may be 0.5 pm. By **contrast**, the resolution of a spectrum analyzer at the same wavelength may be 1MHz to 1kHz...

...SPECIFICATION an optical signal may provide, for example, on the order of one thousand times more **precision** than **measuring** the **optical** signal directly with a wavemeter. As an example, the resolution of a wavemeter at 1.5 (micro).m may be 0.5 pm. By **contrast**, the resolution of a spectrum analyzer at the same wavelength may be 1MHz to 1kHz...

**22/3,K/2 (Item 2 from file: 348)**  
DIALOG(R)File 348:EUROPEAN PATENTS  
(c) 2007 European Patent Office. All rts. reserv.

01259330

**Method and system for inspecting a vehicle-mounted camera**  
**Verfahren und System zur Inspektion einer fahrzeugmontierte n Kamera**  
**Procede et dispositif d'inspection d'une camera a bord d'un vehicule**  
PATENT ASSIGNEE:

FUJI JUKOGYO KABUSHIKI KAISHA, (216493), 7-2, Nishi-Shinjuku 1-Chome  
Shinjuku-Ku, Tokyo-To, (JP), (Applicant designated States: all)

INVENTOR:

Murakami, Keiichi, Fuji Jukogyo Kabushiki Kaisha, 7-2, Nishi-Shinjuku  
1-chome, Shunjuku-ku, Tokyo-to, (JP)  
Miyazawa, Noriyuki, Fuji Jukogyo Kabushiki Kaisha, 7-2, Nishi-Shinjuku  
1-chome, Shunjuku-ku, Tokyo-to, (JP)

LEGAL REPRESENTATIVE:

VOSSIUS & PARTNER (100314), Siebertstrasse 4, 81675 Munchen, (DE)  
PATENT (CC, No, Kind, Date): EP 1087236 A2 010328 (Basic)  
EP 1087236 A3 011017

APPLICATION (CC, No, Date): EP 2000120177 000922;

PRIORITY (CC, No, Date): JP 99269572 990922

DESIGNATED STATES: DE; GB

EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI

INTERNATIONAL PATENT CLASS (V7): G01B-011/27; G01S-003/78; G08G-001/16;  
G05D-001/03; G06T-007/00; G01B-011/00; G03B-015/00; B60R-011/04;  
G01S-011/12

ABSTRACT WORD COUNT: 187

NOTE:

Figure number on first page: 1

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text Language Update Word Count

CLAIMS A (English) 200113 546

SPEC A (English) 200113 5472

Total word count - document A 6018

Total word count - document B 0

Total word count - documents A + B 6018

...SPECIFICATION sample. Hence, it is important to locate the test chart at a predetermined position with **precision**.

For the automatic **measurement** of the **optical** axis, first, the IPU 20 samples a frame of reference image including the test chart...

...cross of the test chart on the reference image. The reference image and a predetermined **brightness** characteristic pattern BP are two-dimensionally matched in the search range R so as to search the position at which a position correlating with the **brightness** characteristic pattern BP, i.e. the cross intersecting point of the test chart, is appeared...

**22/3,K/3 (Item 3 from file: 348)**

DIALOG(R)File 348:EUROPEAN PATENTS

(c) 2007 European Patent Office. All rts. reserv.

01002444

**A SYSTEM FOR ACQUIRING AN IMAGE OF A MULTI-PHASE FLUID BY MEASURING BACKSCATTERED LIGHT**

**EIN SYSTEM ZUM NEHMEN VON BILDERN EINES MEHRPHASIGEN FLUIDS DURCH MESSUNG**

**RUCKGESTREUTEN LICHTES**

**SYSTEME D'ACQUISITION D'IMAGES D'UN FLUIDE EN PLUSIEURS PHASES PAR MESURE**

**DE LA LUMIERE RETRODIFFUSEE**

PATENT ASSIGNEE:

LASER SENSOR TECHNOLOGY, INC., (2127790), 15224 Northeast 95th Street, Redmond, WA 98052, (US), (Proprietor designated states: all)

INVENTOR:

REED, Barry, W., 12520 S.E. 318th Way, Auburn, WA 98002, (US)

HOKANSON, Jon, V., 22512 N.E. 14th Drive, Redmond, WA 98053, (US)

HAMANN, Oliver, S., 21402 N.E. 10th Place, Sammamish, Washington 98053, (US)

MONTAGUE, Thomas, W., 2017 - 230th Place N.E., Redmond, WA 98053, (US)

LEGAL REPRESENTATIVE:

Spall, Christopher John (36171), Barker Brettell, 138 Hagley Road, Edgbaston, Birmingham B16 9PW, (GB)

PATENT (CC, No, Kind, Date): EP 974045 A1 000126 (Basic)

EP 974045 B1 060201

WO.1998045682 981015

APPLICATION (CC, No, Date): EP 98914430 980401; WO 98US6511 980401

PRIORITY (CC, No, Date): US 835188 970407

DESIGNATED STATES: BE; CH; DE; FR; GB; IE; IT; LI

INTERNATIONAL PATENT CLASS (V7): G01N-015/02

INTERNATIONAL CLASSIFICATION (V8 + ATTRIBUTES):

IPC + Level Value Position Status Version Action Source Office:

G01N-0015/02 A I F B 20060101 19990203 H EP

G01N-0025/14 A N L B 20060101 20021008 H EP

B01J-0002/00 A N L B 20060101 20021008 H EP

B01J-0019/06 A N L B 20060101 20021008 H EP

NOTE:

No A-document published by EPO

Figure number on first page: 1

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS B	(English)	200605	598
CLAIMS B	(German)	200605	569
CLAIMS B	(French)	200605	699
SPEC B	(English)	200605	5299
Total word count - document A			0
Total word count - document B			7165
Total word count - documents A + B			7165

...SPECIFICATION on factors like the refractive index of the materials, surface roughness, transparency, size, shape, etc. **Optical measurement** methods lose **precision** and resolution at high concentrations of particles, because the equations which relate particle size to...

...Imaging of particles at high concentrations is affected in the same way; multiple scattering reduces **contrast** and decreases the ability to resolve particles, especially small particles or surface features.  
U.S...

**22/3,K/4 (Item 4 from file: 348)**  
DIALOG(R)File 348:EUROPEAN PATENTS  
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00374987

**Sensors for detecting electromagnetic parameters utilizing vibrating elements.**

**Sensoren mit vibrierenden Elementen zum Detektieren von elektromagnetischen Parametern.**

**Capteurs utilisant des elements vibrants pour detecter des parametres electromagnetiques.**

PATENT ASSIGNEE:

LUXTRON CORPORATION, (534280), 1060 Terra Bella Avenue, Mountain View  
California 94043, (US), (applicant designated states:  
AT;BE;CH;DE;ES;FR;GB;IT;LI;NL;SE)

INVENTOR:

Phillips, Stephen R., 120 El Dorado Road, Walnut Creek California 94595,  
(US)

LEGAL REPRESENTATIVE:

Kopacz, William James (52901), 83, Avenue Foch, F-75116 Paris, (FR)

PATENT (CC, No, Kind, Date): EP 345142 A2 891206 (Basic)

EP 345142 A3 901227

EP 345142 B1 930728

APPLICATION (CC, No, Date): EP 89401466 890530;

PRIORITY (CC, No, Date): US 201599 880602

DESIGNATED STATES: AT; BE; CH; DE; ES; FR; GB; IT; LI; NL; SE

INTERNATIONAL PATENT CLASS (V7): G01D-005/26; G01R-015/07;

ABSTRACT WORD COUNT: 120

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS B	(English)	EPBBF1	1189
CLAIMS B	(German)	EPBBF1	1163
CLAIMS B	(French)	EPBBF1	1305

SPEC B (English) EPBBF1 14179  
Total word count - document A 0  
Total word count - document B 17836  
Total word count - documents A + B 17836

...SPECIFICATION quartz crystal tuning forks have been developed to the extent that such transducers can be **produced** with high **precision** and **at** low cost. In **contrast** to conventional transducers, the quartz crystal transducers of this invention are used not only for...

22/3,K/5 (Item 1 from file: 349)  
DIALOG(R)File 349:PCT FULLTEXT  
(c) 2007 WIPO/Thomson. All rts. reserv.

01427431 \*\*Image available\*\*

**SPECTROPHOMETRIC MEASUREMENTS OF PH IN-SITU**  
**MESURES SPECTROPHOTOMETRIQUES DE PH IN SITU**

Patent Applicant/Assignee:

UNIVERSITY OF SOUTH FLORIDA, 3702 SPECTRUM BLVD., Suite 155, Tampa, Florida 33612, US, US (Residence), US (Nationality), (For all designated states except: US)

Patent Applicant/Inventor:

BYRNE Robert H, 7472 17th Lane NE, St. Petersburg, Florida 33701, US, US (Residence), US (Nationality), (Designated only for: US)

KALTENBACHER Eric, 1039 86th Avenue North, St. Petersburg, Florida 33701, US, US (Residence), US (Nationality), (Designated only for: US)

LIU Xuewu, 140 SEVENTH AVENUE SOUTH, Krc 1115, St. Petersburg, Florida 33701, US, US (Residence), CN (Nationality), (Designated only for: US)

Legal Representative:

TONER Thomas E (agent), Smith & Hopen, P.A., 180 Pine Avenue North, Oldsmar, Florida 34677, US

Patent and Priority Information (Country, Number, Date):

Patent: WO 2006110771 A2 20061019 (WO 06110771)

Application: WO 2006US13524 20060412 (PCT/WO US2006013524)

Priority Application: US 2005670408 20050412

Designated States:

(All protection types applied unless otherwise stated - for applications 2004+)

AE AG AL AM AT AU AZ BA BB BG BR BW BY BZ CA CH CN CO CR CU CZ DE DK DM  
DZ EC EE EG ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KM KN KP KR  
KZ LC LK LR LS LT LU LV LY MA MD MG MK MN MW MX MZ NA NG NI NO NZ OM PG  
PH PL PT RO RU SC SD SE SG SK SL SM SY TJ TM TN TR TT TZ UA UG US UZ VC  
VN YU ZA ZM ZW

(EP) AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LT LU LV MC NL  
PL PT RO SE SI SK TR

(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG

(AP) BW GH GM KE LS MW MZ NA SD SL SZ TZ UG ZM ZW

(EA) AM AZ BY KG KZ MD RU TJ TM

Publication Language: English

Filing Language: English

Fulltext Word Count: 5753

Fulltext Availability:

Detailed Description

Detailed Description

... such, the precision of running averages (spatial and temporal) is significantly improved relative to the **precision** of individual **measurements**.

Comparisons of conventional **optical** cells with small bore cells that are suitable for in-situ measurements indicate that the...

...The existence of nonlinear optical behavior would necessitate calibrations on a per instrument basis. In **contrast**, the present work shows that nonlinear behavior can be eliminated using either PEEK cells, or...

22/3,K/6 (Item 2 from file: 349)

DIALOG(R)File 349:PCT FULLTEXT

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01108091 \*\*Image available\*\*

**HIGH DYNAMIC RANGE OPTICAL INSPECTION SYSTEM AND METHOD  
SYSTEME ET PROCEDE D'INSPECTION OPTIQUE A GAMME DYNAMIQUE ELEVEE**

Patent Applicant/Assignee:

TWINSTAR SYSTEMS INC, 48635 Northport Loop East, Fremont, CA 94538, US,  
US (Residence), US (Nationality)

Inventor(s):

CHHIBBER Rajeshwar, 4929 Cruden Bay Court, San Jose, CA 95138, US,  
WILLENBORG David, 2500 Finley Road, Pleasanton, CA 94588, US,

Legal Representative:

LOHSE Timothy W (agent), Gray Cary Ware & Freidenrich LLP, 2000  
University Avenue, East Palo Alto, CA 94303, US,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200429674 A2-A3 20040408 (WO 0429674)

Application: WO 2003US31071 20030926 (PCT/WO US03031071)

Priority Application: US 2002414511 20020927; US 2003672056 20030925

Designated States:

(Protection type is "patent" unless otherwise stated - for applications prior to 2004)

AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ  
EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR  
LS LT LU LV MA MD MG MK MN MW MX MZ NI NO NZ OM PG PH PL PT RO RU SC SD  
SE SG SK SL SY TJ TM TN TR TT TZ UA UG UZ VC VN YU ZA ZM ZW  
(EP) AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LU MC NL PT RO SE  
SI SK TR

(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG

(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW

(EA) AM AZ BY KG KZ MD RU TJ TM

Publication Language: English

Filing Language: English

Fulltext Word Count: 42857

Fulltext Availability:

Detailed Description

Detailed Description

... The optical inspection system in accordance with the invention is a high dynamic range, high **precision**, large area, broadband, high photon



flux **optical inspection** system and method. The optical inspection system may be used to inspect semiconductor wafers (both...

...from sub micron size to many hundreds of microns in size simultaneously on high **contrast** substrates. The system permits high throughput wafer inspection in which the top, bottom and edges...

22/3,K/7 (Item 3 from file: 349)

DIALOG(R)File 349:PCT FULLTEXT

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00865530 \*\*Image available\*\*

#### **ENHANCED OVERLAY MEASUREMENT MARKS**

#### **MARQUES RENFORCEES DE MESURE DE SUPERPOSITION POUR CONTROLE DE L'ETAT D'UN**

#### **OUTIL D'ALIGNEMENT ET D'EXPOSITION DE SUPERPOSITIONS**

Patent Applicant/Assignee:

INFINEON TECHNOLOGIES NORTH AMERICA CORP, 1730 North First Street, San Jose, CA 95112-4508, US, US (Residence), US (Nationality)

Inventor(s):

YIN Xiaoming, 456 S. El Molino Ave., Pasadena, CA 91101, US,  
GOULD Christopher, 10668 Anna Marie Drive, Glen Allen, VA 23060, US,  
KUNKEL Gerhard, Gruene Strasse 101, 01445 Radebeul, DE,

Legal Representative:

BRADEN Stanton C (et al) (agent), Siemens Corporation - Intellectual Property Dept., 186 Wood Ave. South, Iselin, NJ 08830, US,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200199150 A2-A3 20011227 (WO 0199150)

Application: WO 2001US19679 20010620 (PCT/WO US0119679)

Priority Application: US 2000597123 20000620

Designated States:

(Protection type is "patent" unless otherwise stated - for applications prior to 2004)

CN JP KR

(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR

Publication Language: English

Filing Language: English

Fulltext Word Count: 2791

Fulltext Availability:

Detailed Description

Detailed Description

... 413 disclose a process for measuring overlay misregistration during semiconductor wafer fabrication. The method of **inspecting** the semiconductor wafer utilizes **precision optical inspection** methods and apparatus and performs microscopic measurement of alignment between at least two process layers...

...reference wave for each pixel in the image planes, and synthetic images are formed, the **brightness** of which is proportional to either the complex magnitude or the phase of the mutual...

22/3,K/8 (Item 4 from file: 349)

DIALOG(R)File 349:PCT FULLTEXT  
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00455218 \*\*Image available\*\*

**A SYSTEM FOR ACQUIRING AN IMAGE OF A MULTI-PHASE FLUID BY MEASURING  
BACKSCATTERED LIGHT**

**SYSTEME D'ACQUISITION D'IMAGES D'UN FLUIDE EN PLUSIEURS PHASES PAR  
MESURE**

**DE LA LUMIERE RETRODIFFUSEE**

Patent Applicant/Assignee:

LASER SENSOR TECHNOLOGY INC,

Inventor(s):

REED Barry W,

HOKANSON Jon V,

HAMANN Oliver S,

MONTAGUE Thomas W,

Patent and Priority Information (Country, Number, Date):

Patent: WO 9845682 A1 19981015

Application: WO 98US6511 19980401 (PCT/WO US9806511)

Priority Application: US 97835188 19970407

Designated States:

(Protection type is "patent" unless otherwise stated - for applications  
prior to 2004)

AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE GH GM  
GW HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX  
NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG UZ VN YU ZW GH GM  
KE LS MW SD SZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH CY DE DK ES FI  
FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN ML MR NE SN TD TG

Fulltext Word Count: 6094

Fulltext Availability:

Detailed Description

Detailed Description

... on factors like the refractive index of the materials, surface  
roughness, transparency, size, shape, etc. **Optical measurement**  
methods lose **precision** and resolution at high concentrations of  
particles, because the equations which relate particle size to...Imaging  
of particles at high concentrations is affected in the same way; multiple  
scattering reduces **contrast** and decreases the ability to resolve  
particles,  
especially small particles or surface features

U.S...

?

**29/3,K/1 (Item 1 from file: 349)**

DIALOG(R)File 349:PCT FULLTEXT

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01409426 \*\*Image available\*\*

**SPATIALLY RESOLVING RADIATION DETECTOR AND FABRICATING AND  
OPERATING  
METHODS**

**DETECTEUR DE RADIATIONS A RESOLUTION SPATIALE ET PROCEDES DE  
FABRICATION ET  
D'EXPLOITATION**

Patent Applicant/Assignee:

CARL ZEISS SMT AG, Carl-zeiss-strasse 22, 73447 Oberkochen, DE, DE  
(Residence), DE (Nationality), (For all designated states except: US)

Patent Applicant/Inventor:

MULLER Ulrich, Katzenbachstrasse 24/1, 73447 Oberkochen, DE, DE  
(Residence), DE (Nationality), (Designated only for: US)

Legal Representative:

PATENTANWALTE RUFF WILHELM BEIER DAUSTER UND PARTNER (agent),  
Kronenstrasse 30, 70174 Stuttgart, DE

Patent and Priority Information (Country, Number, Date):

Patent: WO 200689724 A1 20060831 (WO 0689724)

Application: WO 2006EP1589 20060222 (PCT/WO EP2006001589)

Priority Application: US 2005656941 20050228

Designated States:

(All protection types applied unless otherwise stated - for applications  
2004+)

AE AG AL AM AT AU AZ BA BB BG BR BW BY BZ CA CH CN CO CR CU CZ DE DK DM  
DZ EC EE EG ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KM KN KP KR  
KZ LC LK LR LS LT LU LV LY MA MD MG MK MN MW MX MZ NA NG NI NO NZ OM PG  
PH PL PT RO RU SC SD SE SG SK SL SM SY TJ TM TN TR TT TZ UA UG US UZ VC  
VN YU ZA ZM ZW

(EP) AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LT LU LV MC NL  
PL PT RO SE SI SK TR

(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG

(AP) BW GH GM KE LS MW MZ NA SD SL SZ TZ UG ZM ZW

(EA) AM AZ BY KG KZ MD RU TJ TM

Publication Language: English

Filing Language: English

Fulltext Word Count: 8369

Fulltext Availability:

Detailed Description

Detailed Description

... it is possible, using a spatially resolving radiation detector  
according to the invention of the **scanning** type in the manner of  
Figures 3 to 13, to scan with the required nanoscale resolution EUV  
aerial images such as are generated during the high- **precision**  
**measurement** of **optical** components of microlithography projection  
exposure apparatuses operating in EUV. Thus, an irradiance of an...

...results in a photon flux converted into photoelectrons of approximately  
 $6.5 \times 10^4/s$ , whereby a **maximum** signal/noise ratio of approximately 255  
is achieved for a measurement integration time of...

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BUSINESS FULLTEXT

File 9:Business & Industry(R) Jul/1994-2007/Mar 21

(c) 2007 The Gale Group

File 15:ABI/Inform(R) 1971-2007/Mar 22

(c) 2007 ProQuest Info&Learning

File 16:Gale Group PROMT(R) 1990-2007/Mar 21

(c) 2007 The Gale Group

File 20:Dialog Global Reporter 1997-2007/Mar 22

(c) 2007 Dialog

File 47:Gale Group Magazine DB(TM) 1959-2007/Mar 13  
 (c) 2007 The Gale group  
 File 75:TGG Management Contents(R) 86-2007/Mar W2  
 (c) 2007 The Gale Group  
 File 80:TGG Aerospace/Def.Mkts(R) 1982-2007/Mar 21  
 (c) 2007 The Gale Group  
 File 88:Gale Group Business A.R.T.S. 1976-2007/Mar 19  
 (c) 2007 The Gale Group  
 File 98:General Sci Abs 1984-2007/Mar  
 (c) 2007 The HW Wilson Co.  
 File 112:UBM Industry News 1998-2004/Jan 27  
 (c) 2004 United Business Media  
 File 141:Readers Guide 1983-2007/Jan  
 (c) 2007 The HW Wilson Co  
 File 148:Gale Group Trade & Industry DB 1976-2007/Mar 13  
 (c)2007 The Gale Group  
 File 160:Gale Group PROMT(R) 1972-1989  
 (c) 1999 The Gale Group  
 File 275:Gale Group Computer DB(TM) 1983-2007/Mar 21  
 (c) 2007 The Gale Group  
 File 264:DIALOG Defense Newsletters 1989-2007/Mar 16  
 (c) 2007 Dialog  
 File 369:New Scientist 1994-2007/Nov W3  
 (c) 2007 Reed Business Information Ltd.  
 File 370:Science 1996-1999/Jul W3  
 (c) 1999 AAAS  
 File 484:Periodical Abs Plustext 1986-2007/Feb W4  
 (c) 2007 ProQuest  
 File 553:Wilson Bus. Abs. 1982-2007/Mar  
 (c) 2007 The HW Wilson Co  
 File 570:Gale Group MARS(R) 1984-2007/Mar 21  
 (c) 2007 The Gale Group  
 File 608:KR/T Bus.News. 1992-2007/Mar 22  
 (c)2007 Knight Ridder/Tribune Bus News  
 File 620:EIU:Viewswire 2007/Mar 21  
 (c) 2007 Economist Intelligence Unit  
 File 613:PR Newswire 1999-2007/Mar 22  
 (c) 2007 PR Newswire Association Inc  
 File 621:Gale Group New Prod.Annou.(R) 1985-2007/Mar 21  
 (c) 2007 The Gale Group  
 File 623:Business Week 1985-2007/Mar 22  
 (c) 2007 The McGraw-Hill Companies Inc  
 File 624:McGraw-Hill Publications 1985-2007/Mar 22  
 (c) 2007 McGraw-Hill Co. Inc  
 File 634:San Jose Mercury Jun 1985-2007/Mar 21  
 (c) 2007 San Jose Mercury News  
 File 635:Business Dateline(R) 1985-2007/Mar 22  
 (c) 2007 ProQuest Info&Learning  
 File 636:Gale Group Newsletter DB(TM) 1987-2007/Mar 21  
 (c) 2007 The Gale Group  
 File 647:CMP Computer Fulltext 1988-2007/Jun W1  
 (c) 2007 CMP Media; LLC  
 File 696:DIALOG Telecom. Newsletters 1995-2007/Mar 21  
 (c) 2007 Dialog  
 File 674:Computer News Fulltext 1989-2006/Sep W1  
 (c) 2006 IDG Communications

File 810:Business Wire 1986-1999/Feb 28  
(c) 1999 Business Wire  
File 813:PR Newswire 1987-1999/Apr 30  
(c) 1999 PR Newswire Association Inc  
File 587:Jane's Defense&Aerospace 2007/Mar W3  
(c) 2007 Jane's Information Group

Set	Items	Description
S1	305428	(IMAGE?? OR PHOTOGRAPH?? OR PHOTO??)(3N)(VIDEO OR CAMERA)
S2	894	OPTICAL(3N)(PRECISION OR PRECISENESS)(3N)(MEASUR? OR EVALU- AT? OR CALCULAT? OR DETERMIN? OR INSPECT????)
S3	145	ANCILLARY(3N)(PARAMETER? OR VALUES)
S4	1817079	CONTRAST OR HOMOGENEITY OR MEAN(BRIGHTNESS OR BRIGHTNESS - OR GRADIENT?
S5	15	INFLUENCE()QUANTITIES
S6	7914724	WEIGHT? OR WEIGH? OR RANK?
S7	101701	S6(3N)(SUMM OR SUMM OR INTEGRATING OR ACCUMULAT? OR SUMMAT- ION OR TOTAL)
S8	8356	TARGET(3N)FUNCTION??
S9	4	S3(3N)(ALL OR TOTAL)
S10	0	(EXTREMUM OR MAXIMUM)(3N)FUNCTIONAL()DEPENDENCY
S11	15	AU=(NEHSE, U? OR LINSS, G? OR KUHN, O? OR NEHSE U? OR LINSS G? OR KUHN O?)
S12	168527	WAVELENGTH?? OR WAVE()LENGTH??
S13	461738	2D OR (2 OR TWO)(3N)(STRUCTURE? OR DIMENSION?)
S14	19758	WORKPIECE??
S15	645128	SCANNED OR SCANS OR SCANNING
S16	530	TARGET(3N)QUANTITIES
S17	0	S11 AND S2
S18	6	S2(S)(S3 OR S4)
S19	0	S18(S)S5
S20	0	S18(S)S7
S21	0	S18(S)S8
S22	2	S18(S)S12:S16
S23	1	RD S22 (unique items)
S24	1767	S1(3N)S15
S25	0	S24(S)S2
S26	61	S24(S)OPTICAL
S27	61	S26(S)(S3 OR S4 OR FOCUS OR EDGE? OR S5 OR S8 OR S12 OR S13 OR S14 OR S15 OR S16)
S28	61	S27 NOT S22
S29	55	S28 NOT PY=>2002
S30	35	RD S29 (unique items)
S31	0	S30(S)(PRECISION OR PRECISENESS)

23/3,K/1 (Item 1 from file: 47)  
DIALOG(R)File 47:Gale Group Magazine DB(TM)  
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06547036 SUPPLIER NUMBER: 85176179 (USE FORMAT 7 OR 9 FOR FULL TEXT)  
**New ways to guide light. (Perspectives: applied optics).(photonic crystal  
fibers research)**

Knight, J.C.; Russell, P. St. J.  
Science, 296, 5566, 276(2)

April 12, 2002

ISSN: 0036-8075 LANGUAGE: English RECORD TYPE: Fulltext

WORD COUNT: 1197 LINE COUNT: 00098

... broadband supercontinuum (9) that has led to a new generation of high-precision measurements in **optical** frequency metrology (10). Photonic crystal fibers also permit access to guided light in a way...

?